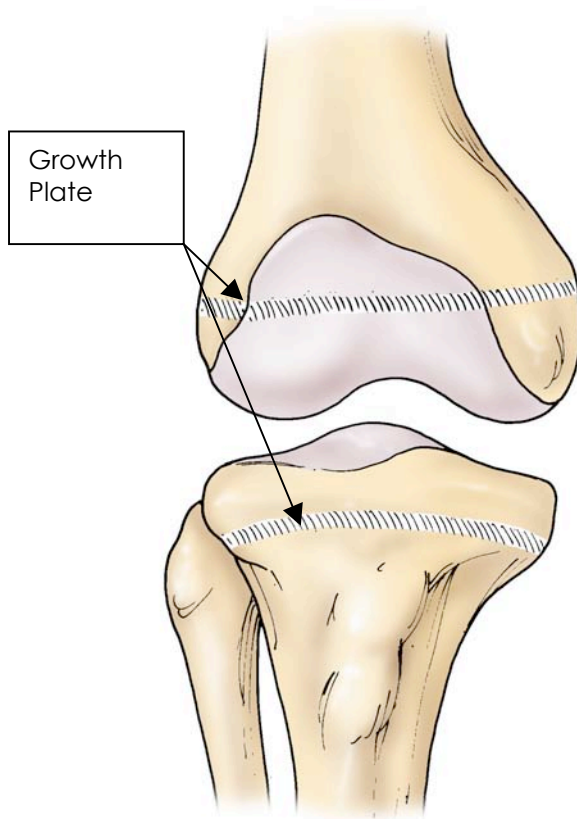


# Leg Lengths & Growth Arrest

Most children have legs that are the same length. However there are numerous conditions that can cause one leg to be shorter or longer than the other. Some of these conditions are present at birth and their exact cause is unknown. Common congenital conditions include: congenital short femur (proximal femoral focal deficiency/PFFD), posterior medial bowing of the tibia, and congenital short tibia (tibia hemimelia). Other conditions such as hemi-hypertrophy, hemangiomas or Klippel-Trenaunay-Webber (KTW), and Wilm's tumor can cause an entire leg to be much larger and longer. Children who are born with legs that are equal can develop differences in length as the result of an injury or stroke.

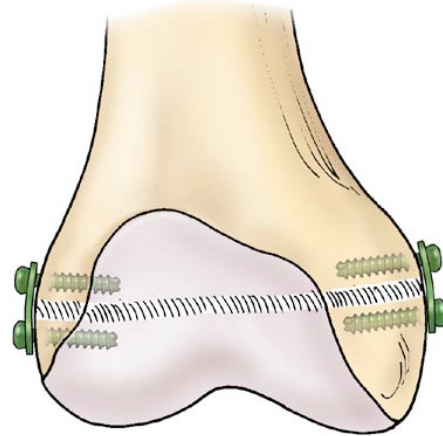


The goal of treatment is to level the hips to prevent possible back problems in adulthood secondary to the leg length inequality. For differences that are expected to be more than three quarters of an inch, surgery may be indicated to help even out the leg lengths.

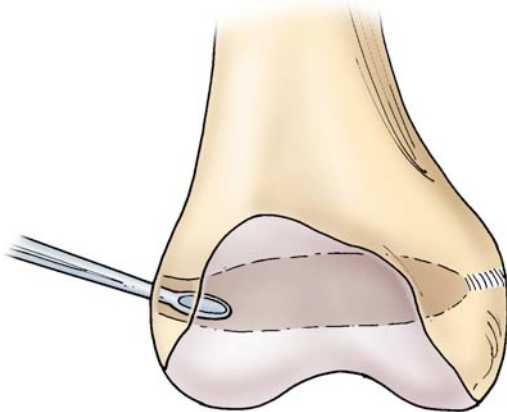
Growth in the length of the leg bones comes from an area at the ends of bones called the growth plate. One way to even out a difference in leg lengths is to stop the growth plate in the longer leg while allowing the shorter leg to continue to grow. As the shorter leg grows and the longer leg stays the same, the difference between the two legs decreases. The approximate date for surgery to stop the growth of the longer leg is estimated based on

several factors including age, height, rate of worsening of the difference, projected difference at adulthood and the condition that caused the difference.

The surgical technique for turning off the growth plate is called “growth arrest” or **epiphyseodesis** and can be done in two ways. In the first option, permanent bone clamps or staples are pushed into the bone around the growth plate. The staples hold the growth plate and prevent the longer leg from continuing to grow. Rarely, the staples loosen before the job is complete causing swelling or allowing growth to resume, both of which may require additional treatment.



In the second option, most of the growth plate is removed through a small hole in the bone. The growth plate is replaced with healed bone, stopping growth in the longer leg. With both options the shorter leg will continue to grow and the difference between the two legs will decrease.



The unique characteristics of your child’s leg length difference will guide the pediatric orthopedic surgeon in recommending the best treatment plan.



2660 10<sup>th</sup> Avenue South • POB 1 • Birmingham, AL 35205 • 205-933-8588

All of the content and images on this Brochure are protected by United States and International copyright law and may not copied, scanned, reproduced, published or altered in any way without written permission.  
© John T. Killian, MD 2009